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SUBSTITUTE SPECIFICATION

CLEAN VERSION

RESPIRATORY AID APPARATUS AND METHOD

BACKGROUND OF THE INVENTION

FIELD OF THE INVENTION

5 The present invention generally relates to a respiratory aid for the alleviation of breathing and airway disorders, and more specifically to a respiratory aid comprising a Venturi air pump.

DISCUSSION OF THE RELATED ART

10 The present invention relates to respiratory disorders in which external devices are used for delivering respiratory gas to assist spontaneous or forced breathing. Although the invention relates in particular to sleep apnea, the device and method disclosed in the following are not limited to this particular use and can be utilized for the alleviation of other respiratory disorders as well.

15 Sleep apnea is a disorder characterized by full or partial cessation of breathing during sleep. Apnea is defined as an interruption in breathing (air-flow into the lungs) for at least ten seconds, accompanied by a decrease in oxygen saturation. Hypopnea is a milder form in which there is a 50% decrease in air-flow for more than ten seconds. The number of incidents in which there is an
20 interruption in breathing define the severity of the disorder. Patients suffering from sleep-associated apnea may have as many as 300-500 such interruptions in air-flow per night, each lasting 30-40 seconds. Obstructive Sleep Apnea (OSA) is the most common apneic disorder stemming from a mechanical obstruction in the upper respiratory airways during sleep. It is caused by recurrent blockage or
25 narrowing of the airways during sleep and reduction in oxygen saturation.

Following the period of cessation of breathing, an abrupt, but brief, waking occurs caused by the urgent need for oxygen. This requirement is met by a single